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(56) Documents Cited

None

(58) Field of Search

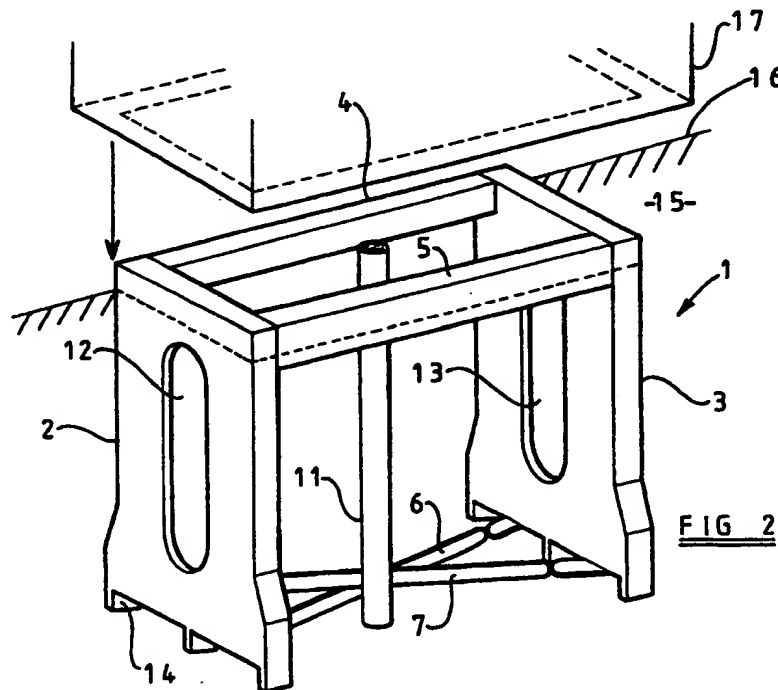
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(54) Base unit for roadside furniture

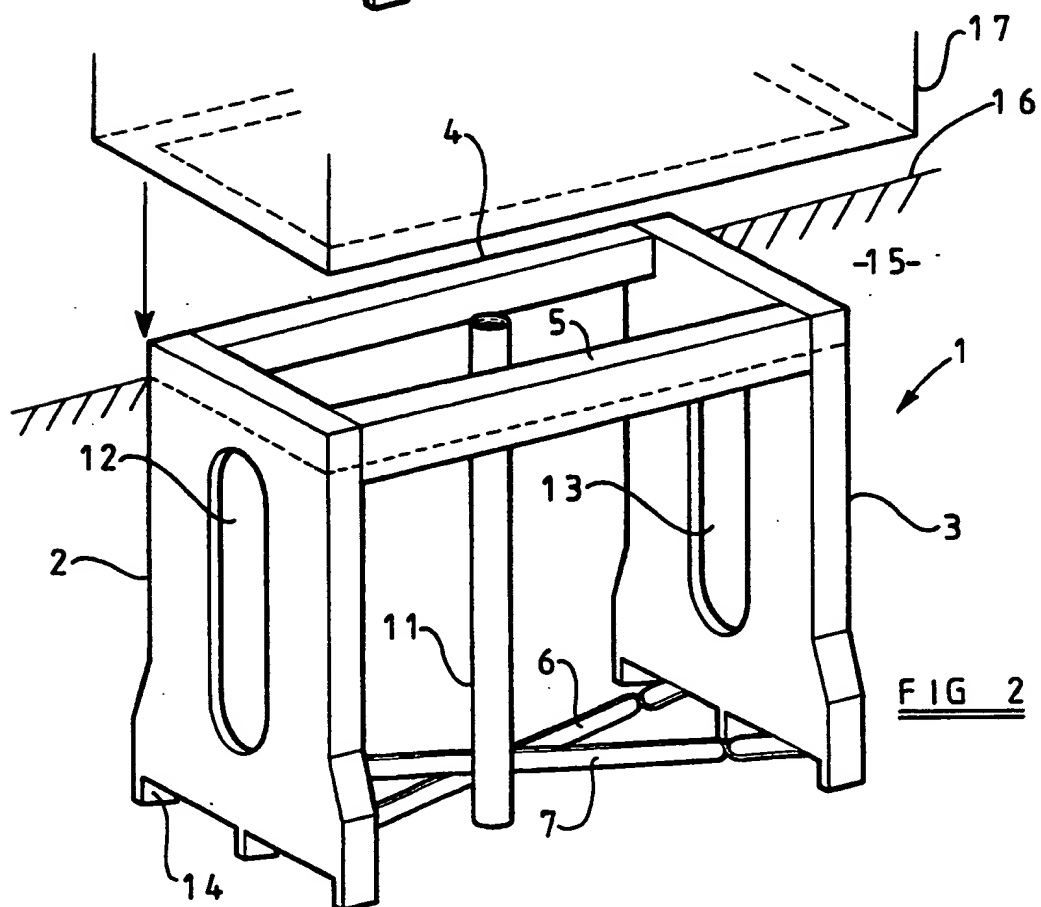
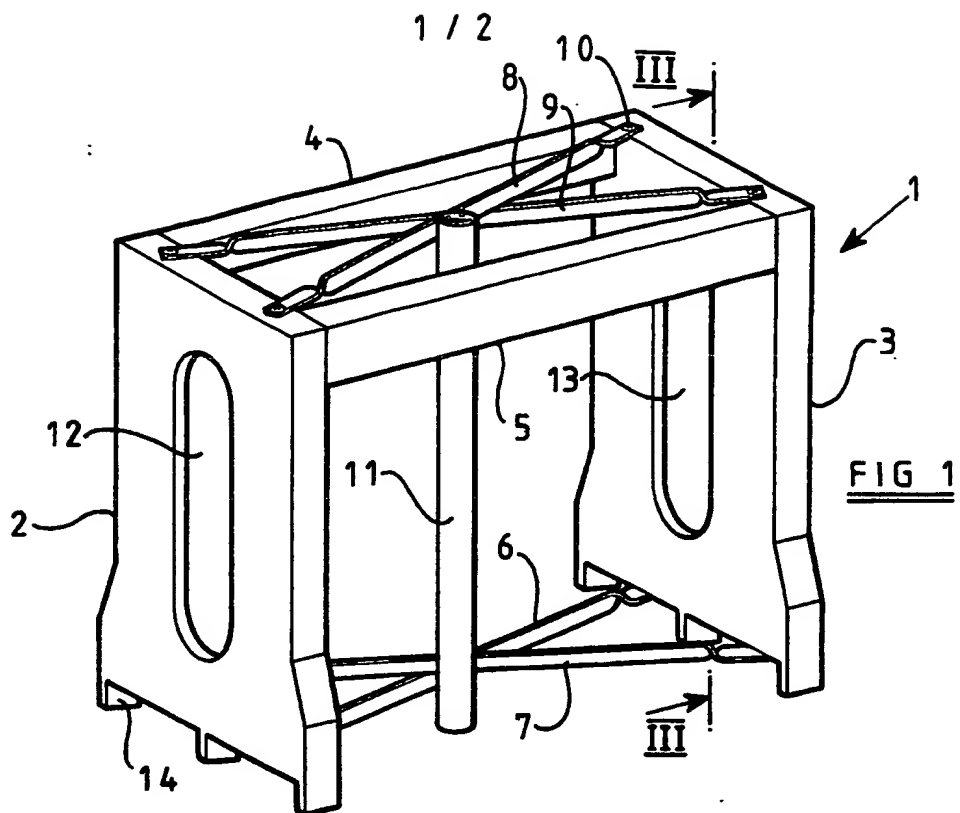
(57) A base unit 1 for a distribution cabinet or other roadside furniture is adapted to be partially embedded in the ground so that an upper portion of the unit 1 projecting above the ground 16 serves as a plinth to which the cabinet 17 may be secured. The unit 1 comprises two base feet 2, 3 defining opposite ends of the unit, two plinth bars 4, 5 defining respectively the front and rear of the unit and extending between upper parts of the base feet 2, 3 projecting above the ground 16, and cross-bracing bars 6, 7 extending between the base feet 2, 3 and serving to brace the unit. Once assembled the unit is braced and locked rigidly into shape by the cross-bracing bars 6, 7 extending between the two base feet 2, 3.

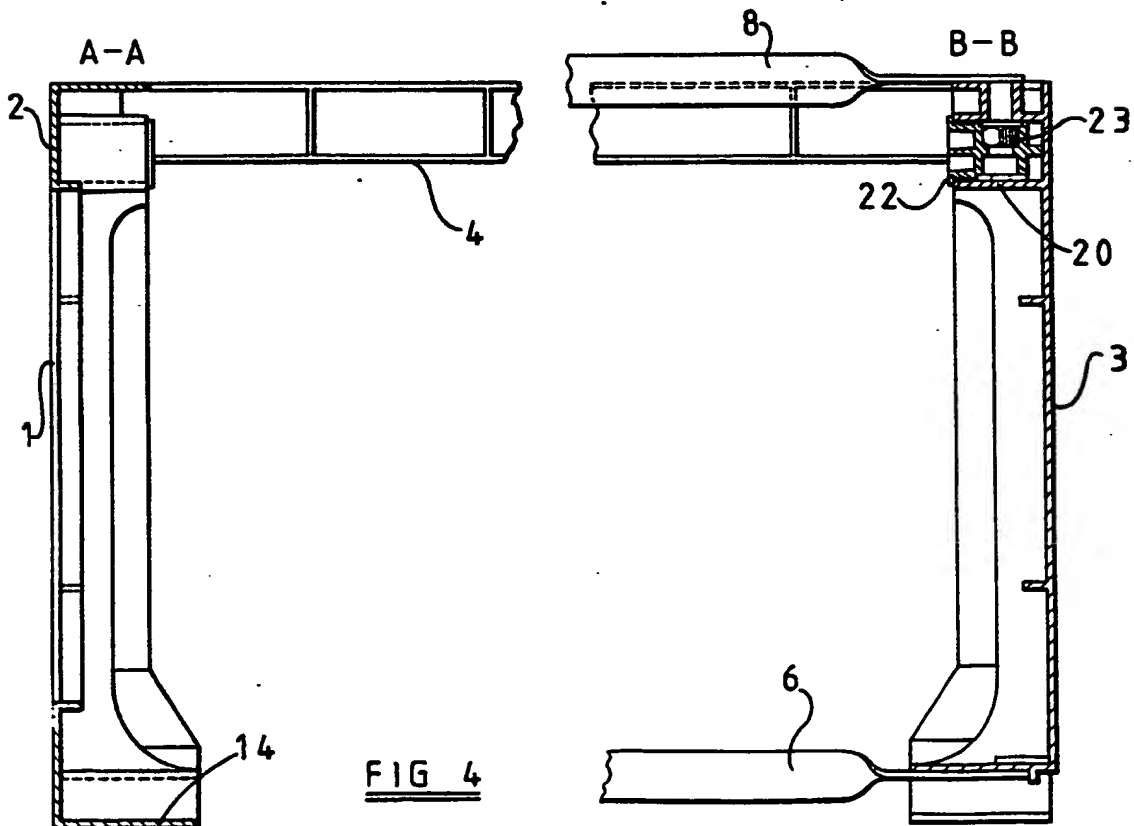
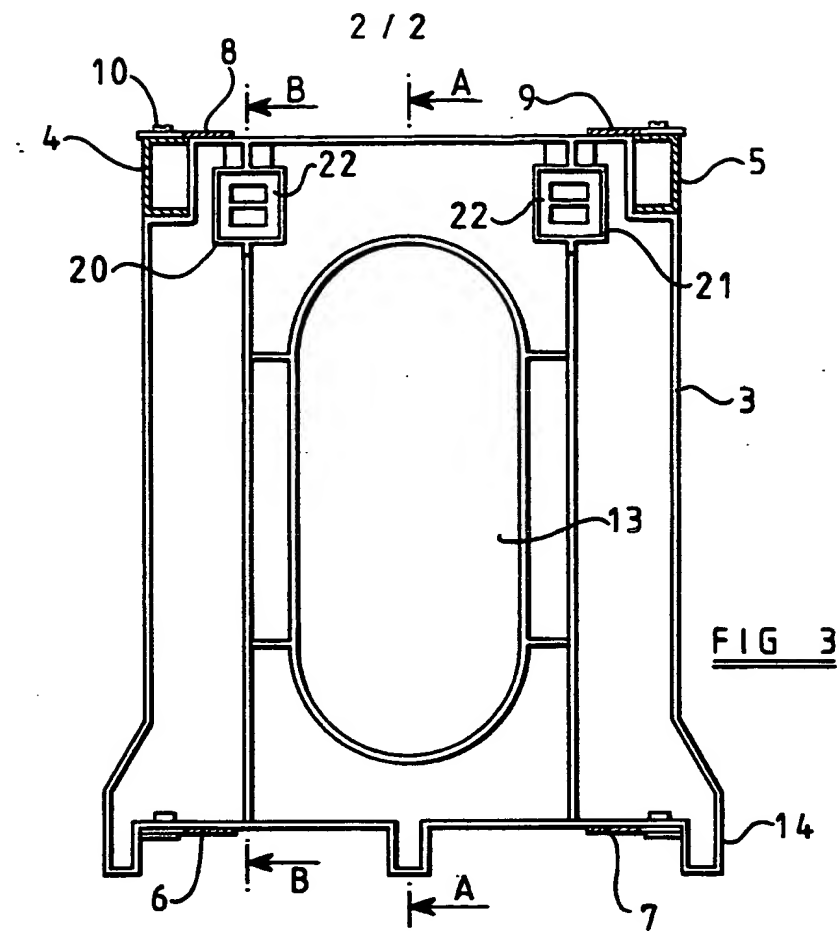


At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

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"Base Units for Distribution Cabinets"

This invention relates to base units for distribution cabinets and other roadside furniture.

5 Distribution cabinets are commonly used at roadside locations for accommodating connections between sets of cables in a telecommunications or power utility network or in other applications where electrical, mechanical or hydraulic connections require
.10 to be made and/or housed. Such cabinets are provided at key locations for protection of the connections and to allow authorised personnel to access such connections for the purpose of maintenance of the existing connections or addition of further connections.

15 As is well known, such cabinets are attached to plinths which are themselves secured to base structures which have previously been embedded in the ground and which allow passage of cabling, pipework or linkages from below ground level to above ground level
20 within the cabinet.

Conventionally the support structure which is used for such cabinets is constituted by a rigid metal framework which is easily damaged during installation in such a way that it can no longer form the support
25 structure for the cabinet and which has a limited life, particularly in situations where it is subject to corrosion. Such support structures are bulky to store and transport, particularly since different sized support

structures must be provided for different sized cabinets.

It is an object of the invention to provide a novel form of base unit for a distribution cabinet or
5 other roadside furniture.

According to the present invention there is provided a base unit for a distribution cabinet or other roadside furniture, the unit being adapted to be partially embedded in the ground so that an upper
10 portion of the unit projecting above the ground serves as a plinth to which the cabinet may be secured, wherein the unit comprises two base feet defining opposite ends of the unit, two plinth bars defining respectively the front and rear of the unit and extending between upper
15 parts of the base feet projecting above the ground, and cross-bracing bars extending between the base feet and serving to brace the unit.

Once assembled the unit is braced and locked rigidly into shape by the cross-bracing bars extending
20 between the two base feet.

In a preferred embodiment of the invention the cross-bracing bars include two bracing bars each of which is secured at its ends to the two base feet and crosses over the other bracing bar at a location
25 intermediate the base feet. The two bracing bars may, for example, be secured to lower parts of the base feet so as to be located substantially along a horizontal plane when the unit is installed in position.

Preferably the cross-bracing bars include two further bracing bars adapted to be secured to the upper parts of the base feet during installation of the unit and which may be removed prior to securing of the cabinet.

5 The base feet may be constituted by end walls having apertures therethrough for the passage of cabling, pipework or mechanical linkages. Furthermore the unit may be substantially open along the front and rear except where the plinth bars extend, in order to
10 allow for the passage of cabling, pipework or linkages. Advantageously the lower parts of the base feet have downwardly extending projections to assist in levelling of the unit prior to encasement in cement aggregate.

Conveniently the unit is adapted to be
15 assembled on site, and for this purpose the ends of the plinth bars may be designed to be receivable in recesses in the base feet during assembly.

In addition the unit preferably includes a drainage pipe and fastener means for attaching the pipe
20 to the cross-bracing bars so that the pipe extends substantially vertically within the installed unit.

In order that the invention may be more fully understood, a base unit in accordance with the invention will now be described, by way of example, with reference
25 to the accompanying drawings, in which:

Figure 1 is a schematic perspective view of the base unit assembled prior to installation in the ground; and

Figure 2 is a schematic perspective view of the base unit installed in the ground prior to mounting of the cabinet thereon;

Figure 3 is a cross-section through the base unit; and

Figure 4 is an axial section through the base unit.

Referring to Figure 1, the base unit 1 is assembled on site from components made from strong plastics and/or metal materials which will generally be supplied in the form of a kit. Such kits are relatively compact for ease of storage and transport, and will be produced in a range of sizes to suit different sized cabinets.

More particularly the base unit 1 is assembled from two base feet 2 and 3 which are placed parallel to one another and interconnected by two plinth bars 4 and 5 having reduced diameter ends which fit within blind recesses in the base feet 2 and 3. In order to brace the unit two bracing bars 6 and 7 are screwed to lower parts of the base feet 2 and 3, and additionally two further bracing bars 8 and 9 are screwed to upper parts of the base feet 2 and 3 by screws 10. A drainage tube 11 is then secured to one of the bracing bars 8 or 9 and/or one of the bracing bars 6 or 7 by a fastener (not shown) supplied with the kit.

It will be appreciated that the assembled unit is of rigid construction and is securely held together

with the base feet 2 and 3 in parallel alignment by means of the bracing bars 6, 7, 8 and 9. The base feet 2 and 3 have large central apertures 12 and 13 for the passage of cabling, and additionally the unit is open 5 along its front and rear below the plinth bars 4 and 5 in order to allow for multi-point access from the front and/or rear as desired.

Figures 3 and 4 show sections through the assembled unit in greater detail from which it will be 10 appreciated that the base feet 2, 3 and the plinth bars 4 and 5 are plastics mouldings formed with strengthening ribs on their inside surfaces. Figure 3 shows a cross-section through the unit taken along line III-III in Figure 1 so as to show the inside surface of the base 15 foot 3 and so as to show the parts connected thereto in section. Figure 4 shows an axial section through the unit, the left hand side of the Figure being a section taken along the line A-A and the right hand side of the Figure being a section taken along the line B-B in 20 Figure 3.

Figures 3 and 4 shows blind recesses 20 and 21 provided in each of the base feet 2, 3 for receiving securing nut housings 22. Each securing nut housing 22 houses a respective securing nut 23 through which a 25 securing bolt is passed for securing the cabinet to the unit. However the securing nut housings 22 are not initially inserted into the recesses 20 and 21 for a reason which will become apparent from the following

description of the installation of the assembled unit.

The assembled base unit 1 is installed within a trench of a predetermined size (typically about 1000mm long, 500mm wide and 350mm deep) into which the cables
5 to be connected extend, a 50mm layer of sand being placed in the base of the trench prior to the unit being placed in the trench. After the unit has been positioned in the trench so that the upper part of the unit projects approximately 40mm above ground level, the
10 cables are brought to ground level by way of cable ducts, and a small amount of sand is packed around the bottom of the drainage tube 11 to prevent any backfilling of concrete. To assist in levelling of the unit within the trench, each of the base feet 2 and 3
15 has three downwardly extending projections 14 which may be pushed into the layer of sand at the base of the trench to a lesser or greater extent to ensure that the upper part of the base unit is level.

The trench is then filled with concrete with
20 the base unit in place whilst leaving sufficient room for any top dressing such as a layer of tarmacadam, the concrete filling the inside of the unit and surrounding the cable ducts. The concrete is vibrated to ensure full encasement of the unit, and the base level is
25 reaffirmed before the concrete is left to set. Care must be taken during filling of the trench that no concrete splashes or fouls the recesses 20, 21 in the base feet 2 and 3 provided for the securing nut housings

22 which are not inserted until after the unit has been installed in the ground in order to ensure that the securing nuts are maintained free of concrete splashes.

When the concrete around the unit has set,
5 the area around the unit and the cable ducts may be surface dressed as required, and the bracing bars 8 and 9 are then unscrewed and discarded so as to leave the unit embedded in the ground 15 with its major portion below ground level 16, as shown in Figure 2. The
10 drainage tube 11 may then be cut off at the level of the upper surface of the concrete. If earth continuity is required an approved rod may inserted through the drainage tube 11 and driven into the ground to the necessary length.

15 A base plate (not shown) having holes therethrough for the cables is then mounted on the base unit in known manner, and a back plate, complete with any pre-assembled components, is bolted in position and all cable connections made prior to the cabinet 17
20 being lowered over the top of the unit and bolted in position.

The described assembly procedure is designed to give engineers an unobstructed work area in which to undertake all necessary cable connecting. However,
25 time, climatic conditions and/or working practices may dictate alternative procedures.

CLAIMS

1. A base unit for a distribution cabinet or other roadside furniture, the unit being adapted to be partially embedded in the ground so that an upper portion of the unit projecting above the ground serves as a plinth to which the cabinet may be secured, wherein the unit comprises two base feet defining opposite ends of the unit, two plinth bars defining respectively the front and rear of the unit and extending between upper parts of the base feet projecting above the ground, and cross-bracing bars extending between the base feet and serving to brace the unit.
2. A base unit according to claim 1, wherein the cross-bracing bars include two bracing bars each of which is secured at its ends to the two base feet and crosses over the other bracing bar at a location intermediate the base feet.
3. A base unit according to claim 2, wherein the two bracing bars are secured to lower parts of the base feet so as to be located substantially along a horizontal plane when the unit is installed in position
4. A base unit according to claim 1, 2 or 3, wherein the cross-bracing bars include two further bracing bars adapted to be secured to the upper parts of the base feet during installation of the unit and which may be removed prior to securing of the cabinet.
5. A base unit according to any preceding claim, wherein the base feet are constituted by end walls having

apertures therethrough for the passage of cabling, pipework or mechanical linkages.

6. A base unit according to any preceding claim, wherein the unit is substantially open along the front and
5 rear except where the plinth bars extend, in order to allow for the passage of cabling, pipework or linkages.

7. A base unit according to any preceding claim, wherein the lower parts of the base feet have downwardly extending projections to assist in levelling of the unit
10 prior to encasement in cement aggregate.

8. A base unit according to any preceding claim, wherein, in order to permit the unit to be assembled on site, the ends of the plinth bars are adapted to be receivable in recesses in the base feet during assembly.

15 9. A base unit according to any preceding claim, which further includes a drainage pipe and fastener means for attaching the pipe to the cross-bracing bars so that the pipe extends substantially vertically within the installed unit.

20 10. A base unit for a distribution cabinet or other roadside furniture, the base unit being in assembled or disassembled form and substantially as hereinbefore described with reference to the accompanying drawings.

- 10 -

Patents Act 1977
Examiner's report to the Comptroller under Section 17
(The Search report)

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Relevant Technical Fields

- (i) UK Cl (Ed.L) E1G
 (ii) Int Cl (Ed.5) E02D

Search Examiner
 D Haworth

Date of completion of Search
 19 October 1993

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

Documents considered relevant following a search in respect of Claims :-
 1-10

(ii) ONLINE DATABASE : WPI

Categories of documents

X: Document indicating lack of novelty or of inventive step.

P: Document published on or after the declared priority date but before the filing date of the present application.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

A: Document indicating technological background and/or state of the art.

&: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
	NONE	

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).